RMRS Rocky Mountain Remediation Services, L.L.C.
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INSTRUCTION

OPERATION AND MAINTENANCE OF THE
MOUND SITE PLUME TREATMENT SYSTEM &
EAST TRENCHES PLUME GROUNDWATER TREATMENT SYSTEM

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1.0 PURPOSE

This work instruction provides steps for routine operations and maintenance of the MOUND SITE PLUME TREATMENT SYSTEM (**MSPTS**) & EAST TRENCHES PLUME GROUND WATER TREATMENT SYSTEM (**ETPTS**).

2.0 SCOPE AND APPLICABILITY

This work instruction applies to Waste Water Treatment Plant (**WWTP**) personnel operating and maintaining the **MSPTS & ETPTS.**

The work instruction provides the **WWTP** operators with the steps for ongoing routine operations and maintenance of the **MSPTS & ETPTS**.

3.0 OVERVIEW

This document contains instruction for the operation and maintenance of the reactor tanks for both the **MSPTS & ETPTS.**

The systems are designed to treat ground water from both sites impacted by volatile organic compounds (VOC's) and radionuclides (if present).

Both systems consist of a central collecting sump channeling the ground water to the reactor tanks. Normal operation will send the water to the reactor tanks flowing from west to east in series then to the metering manholes before being released back into the ground.

The effectiveness of the treatment tanks is impacted by the permeability of the media. The contents of the water flowing through the tanks can cause surface crusting which needs to be monitored and broken up to insure an even flow across the entire surface of the reactor.

4.0 PREREQUISITES

4.1 PLANNING AND COORDINATION

MANAGEMENT

[1] Direct confined space activities performed in accordance with this procedure.

[2] Direct RCT support for activities performed in accordance with this procedure.

4.0 PREREQUISITES CONTINUED

OPERATOR

[1] Request confined space support for activities performed in accordance with this procedure.

[2] Request RCT support for activities performed in accordance with this procedure.

5.0 ROUTINE OPERATIONS

The routine inspection of water levels in the reactors should be done weekly and routine maintenance every other week initially. Also following a heavy (> 1 inch in 24 hours) precipitation the reactor water level should be checked and the sump water inspected for unusual turbidity. High turbidity may require more frequent maintenance. Monitor the ventilation pipes to make sure they are clear.

6.0 ROUTINE MEDIA MAINTENANCE

A. Open the access doors and allow tank to ventilate for 15 minutes.
B. Inspect the condition of the media from above the tank. Make any observations in the chronological log book.
C. Rake surface as required with the long rake.
D. If surface is to crusty to rake, notify supervision.
E. To break up crust, obtain a generator, 2KW minimum, and a concrete vibrator to help break up the surface.
F. Note all actions taken in the chronological log book.
G. If the above step cannot be performed satisfactorily, continue on to section 7.0.

7.0 ROUTINE MEDIA MAINTENANCE REQUIRING TANK ENTRY

CAUTION

IF ENTRY INTO THE TANK IS REQUIRED ALL RULES REGARDING CONFINED SPACE ENTRY APPLY!

NOTE

RCT & SAFETY SUPPORT IS REQUIRED TO PERFORM THIS TASK!

The following outlines this operation.

1. Assemble the following tools and equipment;

   A. Aluminum or fiberglass extension ladder that has a safe extended length of at least 10 feet.
   B. Square point shovels with fiberglass handles.
   C. A pick or Pulaski.
   D. Asphalt Lute with aluminum head and 15 foot extendable handle.
   E. Standard 4 tine garden cultivator rake.
   F. Air compressor and tools for breaking up crust.
   G. All equipment that is required per safety and the fire department for a confined space entry.

7.0 OUTLINE CONTINUED

2. Obtain confined space entry permit. The RFETS Confined Space Entry procedure (MAN-072-AS&IH PM SECTION 21) should be followed for any entry into the reactors. sump or metering manhole.

3. Open the access doors on each reactor to enhance ventilation and provide access.

4. Measure and record the depth to the top of the water and to the top of the media in the operation log.

5. Visually inspect the surface of the media from outside the reactor. If it is not possible to ascertain whether a precipitate film is forming from outside the reactor prepare to enter the reactor for closer inspection.

6. Place the ladder in the reactor and tie it off securely.

7. Entrants enter reactor, following requirements of the safety representative, for close visual inspection of media for formation and accumulation of precipitates and formation of iron matte.

8. Break up iron matte and handle per supervision.

9. After breaking up any iron matte, re-grade the media surface with the rake or lute. Be sure that all the media is submerged.

10. Entrants exit the reactor.

11. Rinse tools with fresh water and discharge the water to the reactor. Follow RCT instructions. Close the reactor doors.

12. Record all activity in the chronological log book.